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ABSTRACT

In this study, burnout is viewed as a multidimensional adaptational outcome of stress which begins when an individual ineffectively appraises or copes with the work environment and job stressors, or encounters excessive stressors in the work environment. The study investigated the personal characteristics of teachers and aspects of their work environment as they related to this multidimensional concept of burnout. It also sought to determine whether high-risk teachers can be identified early in the school year. Subjects were 136 kindergarten through eighth grade teachers. The subjects responded to three questionnaires during the course of the school year. The scales for the study tapped three major dimensions--personal characteristics, the environment, and burnout. The questionnaires covered background information, coping skills, appraisal, emotions, expectations, school climate, job satisfaction, depression, negative attitudes, absenteeism, illness, visits to the doctor, intention to leave the profession, intention to leave the school, and a burnout inventory. The relationship between burnout and these multidimensional factors is discussed. Recommendations are made for teacher and administrator training. More than a hundred references are cited. (JD)

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THE RELATIONSHIP OF TEACHER BURNOUT TO PRIMARY AND SECONDARY APPRAISAL, COPING SYSTEMS, ROLE STRAIN AND TEACHER/PRINCIPAL BEHAVIOR

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INTRODUCTION

> One of the most fundamental measures of a society is the quality of its public education. Teachers are the cornerstone of public education. They formulate and deliver the ultimate results of our educational system. They bear much of the challenge and burden, and have recently been the subject of much controversy. (Harris & Associates, 1985, p. ii)

Researchers have found teaching to be a stressful profession (Dunham, 1976; Feitler & Tokar, 1983; Schwab & Iwanicki, 1982). In surveys (Broiles, 1982; Kyriacou & Sutcliffe, 1977, 1978b, 1979a, 1979b), approximately 20-30% of teachers rate teaching as very stressful, while 90% of teachers report some job stress (Hawkes & Dedrick, 1981).

Kyriacou and Sutcliffe, considered pioneers in the field of teacher stress, viewed occupational stress as a multidimensional construct. These authors (Kyriacou, 1980, 1981; Kyriacou & Sutcliffe, 1977, 1978a), and Lazarus (1974), defined teacher stress as a response syndrome of unpleasant, negative emotions and distress such as anger, tension, frustration, emotional exhaustion, anxiety, or depression. This is usually accompanied by potentially pathogenic physiological changes such as increased heart rate or release of adrenocorticotrophic hormone into the blood stream. Stress results from the perception that the demands made upon the teacher constitute a threat to his or her self-esteem or well-being. Coping mechanisms are activated to reduce the perceived threat. If these coping actions are unsuccessful in reducing pressures, a number of emotional and psychological reactions are experienced. Continued exposure to stress situations without a

corresponding increase in coping resources brings fatigue, exhaustion, and burnout (Dunham, 1980, 1984).

Stress is seen as "a process of behavioral, emotional, mental and physical reactions caused by prolonged, increasing, or new pressures which are significantly greater than coping resources" (Dunham, 1984, p. 3). This interactionist model of stress, based on Lazarus (1966), is concerned with the pressures, reactions, and coping resources of teachers. Stress signifies a significant excess of pressures over coping resources. It is important to identify the demands which teachers perceive and experience as stressful, and the behavior they use to handle these demands. Therefore, whether a teacher experiences stress will depend on how he or she appraises his or her environment, the amount of stressors in his or her work environment, and the coping mechanisms he or she is able to utilize.

Burnout is a prevalent condition among persons in the helping professions such as nurses, social workers, teachers, mental health workers, clergy, and criminal justice system workers. People in these human services professions have direct, intense contact with the various recipients of their services (Cherniss, 1980a; Maslach, 1978a, 1978b, 1981).

Human services performed by teachers and other helping professionals share three basic characteristics which make the process of burnout almost inevitable. They engage in emotionally draining work; they demonstrate personality characteristics, such as idealism, enthusiasm, caring about others, and sensitivity, which helped them

choose their profession; and their focus is on the recipients receiving services (Pines & Aronson, 1981). Ryerson and Marks (1982) agreed that human service professionals are prone to burnout "due to a unique combination of personality characteristics, professional training, job demands and rewards, organizational structures, and political and economic realities" (p. 153).

Burnout can be defined as a syndrome of emotional and physical exhaustion and cynicism that can occur among individuals who work with people most of the time. The syndrome involves the development of negative job attitudes; loss of concern and feeling for recipients of individual's service; and the development of negative feelings about oneself as a professional helper (Cherniss, 1980a; Maslach & Jackson 1981a 1981b; Pines & Maslach, 1978, 1980). Researches and theorists usually define burnout in terms of the psychological experience of the individual (Shinn, 1982). Perlman and Hartman (1982) defined burnout as a response to chronic emotional stress with three components: (a) emotional and physical exhaustion, (b) lowered job productivity, and (c) depersonalization. Some related concepts are employee absenteeism, turnover (Cherniss, 1980a), poor job performance, job satisfaction, low morale, alienation, and psychological and physiological manifestations of job strain (Maslach & Jackson, 1981a; Shinn, 1982). Individuals deal with burnout in a variety of ways; for example, by leaving the profession, switching to another job in the same profession, becoming an administrator, never quitting, or personally growing as a result of the burnout crisis (Pines & Aronson, 1981).

Burnout can be costly to the individual and to the teaching profession (Maslach, 1982b; Paine, 1982a). It is costly for those who quit their jobs in terms of their wasted training, and it is costly for those who stay in terms of the psychological price they pay. It is costly for the organization in terms of lost talent and poor performance, and it is costly for the students and teachers (Pines, Aronson, & Kafry, 1981). As a result of her study of idealism in 111 teachers, Pines (1982) stated that the loss of sensitive and highly motivated teachers may represent one of the highest costs of burnout. Belcastro (1982) found a relationship between burnout and the initial onset of specific health problems in the teachers she studied; therefore, she felt burnout seemed to represent a potential health risk to these teachers. In Bloch's (1978) clinical exams and long-term medical histories of 300 teachers referred for psychiatric evaluation, he found many of the physical and behavioral symptoms that are listed in the burnout literature. The intensities of teachers' stresses prompted Bloch (1978) to equate the emotional states of some Los Angeles inner-city school teachers with combat neurosis of American soldiers in wartime battle.

Burnout is a problem for teachers because of its ill effects on them emotionally, physically, psychologically, and behaviorally. It also affects the students because the teacher is unable to care for, listen to, or assist the students; the teacher is too involved in his or her own personal survival in the classroom to be able to provide a quality education to the students (Cherniss, 1980a; Maslach, 1982a;

Maslach & Jackson, 1981a, 1981b; Weiskopf, 1980). Teachers who are involved in the burnout process are unable to model the necessary skills children need to develop into responsible people, such as self-assurance, decision-making abilities, and the ability to effectively appraise and cope with problems.

Burnout research is in its infancy (Jones, 1982; Maslach, 1982a, 1982b; Minnehan & Paine, 1982). There have been few empirical studies on burnout in the human services; most of the literature has been anecdotal (Carroll & White, 1982; Einsiedel & Tully, 1982; Meier, 1983; Perlman & Hartman, 1982; Shinn, 1982). Until a model of burnout is developed through definitive, experimental research, the causes, consequences, and remediation of burnout cannot be dealt with except hypothetically. Burnout has been acknowledged as an important occupational hazard, yet serious questions remain about the validity of the construct. There are many definitions, proposed causes, and assumed effects associated with burnout (Cherniss, 1980a; Jones, 1982; Meier, 1984; Minnehan & Paine, 1982).

The relationship between stress and burnout is discussed by many researchers (Dunham, 1980, 1984; Needle, Griffin, & Svendsen, 1981; Tubesing & Tubesing, 1982; Beninga & Spradley, 1981). There is agreement that there is a relationship between stress and burnout, but there are many views as to what that relationship is. Burnout has been viewed as a process that begins with stress and is seen as a coping response used to situations characterized by uncontrollable stress (Cherniss, 1982). Continued exposure to stressful situations without a

corresponding increase in coping resources leads to fatigue, exhaustion, and burnout; burnout is the final state in the stress process (Dunham, 1980, 1984; Freudenberger, 1975, 1977). Burnout is also viewed as a result of stress overload (Cardinell, 1981), or chronic emotional exhaustion, or chronic emotional stress (Maslach, 1978a; Maslach & Jackson, 1982; Pines, 1982).

Another view is that burnout is a process which begins because professionals do not know how to cope with the emotional stresses of their work and are, therefore, unable to continue caring and feeling the initial commitment they felt toward their job (Maslach & Pines, 1977; Schwartz, Olson, Bennett, & Ginsberg, 1983; Weiskopf, 1980).

Burnout has also been viewed as a discreet phenomenon which is not necessarily a subset of occupational stress, but is linked to it (Paine, 1982a; Shinn, Rosario, Morch, & Chestnut, 1984). In contrast, after reviewing the literature on stress and burnout, Perlman and Hartman (1980) concluded that burnout is a constellation of responses to stress and best understood as one subset of stress reactions.

In this study, burnout is viewed as a multidimensional adaptational outcome of stress which begins when an individual ineffectively appraises and/or copes with his or her work environment and job stressors, or when an individual encounters excessive stressors in his or her work environment. Continued ineffectiveness or excessive stress leads to job distress and finally, in its extreme, to job burnout. The mere presence of job stressors in the work environment is insufficient to cause teacher stress and finally burnout. The degree of

stress is mediated by the teacher's appraisal of the intensity of the job stressors and his or her appraisal of the efficacy of his or her coping resources (Holroyd & Lazarus, 1982). This process could be interrupted at any point as the individual begins to appraise and/or cope effectively with job stressors and his or her work environment. Job burnout, the final stage in this model, is not necessarily irreversible.

The National Educational Association states that by 1990, the nation's schools will need one million new teachers (Bowen et al., 1985; Connell, 1985a) to replace those leaving the profession and to meet the needs of an increased population of school-aged children. By 1991, California will need 110,000 teachers and will have 450,000 more students (Bowen et al., 1985; "More . . . Shortage," 1985). Some of the teachers who are leaving the profession and some of those who are staying and not performing adequately are unable to cope with the stress of educational problems. Often they have been labeled burned out (Schwab, 1980). In order for the field of education to improve, the types of individuals who enter the profession and the environments these teachers encounter need to be examined to see if teachers are experiencing burnout, the reason for burnout, and the means of preventing burnout.

This study investigated the personal characteristics of teachers and aspects of their work environment as they relate to a multidimensional concept of burnout.

This study also determined whether teachers can be identified at the beginning of the year who are at high risk of being burned out at the end of the year.

Two studies based on the dissertation, Teacher Burnout: The Person and Environmental Influences, are discussed in this paper. The major objective of one study was to provide an empirical model of how appraisal and coping relate to burnout. The major objective of the other study was to provide an empirical model of how role strain and teacher and principal behavior
relate to burnout.

METHOD

Procedure

Teacher volunteers were asked to respond to a questionnaire, which took approximately one hour to complete, three times during the 1985-1986 school year. Questionnaires were sent to the participants at the beginning of October 1985, middle of January 1986, and the beginning of May 1986. Questionnaires were accepted up to one month after the date sent. All responses were anonymous and confidential.

Initially, 176 teachers agreed to participate. At Time 1, 147 teachers returned Questionnaire 1. Therefore, 147 questionnaires were sent out at Time 2, and 141 teachers returned Questionnaire 2. Of the 141 questionnaires sent out at Time 3, 136 teachers returned Questionnaire 3.

Description of Subjects

The eventual subjects were 136 kindergarten through eighth grade self-contained classroom teachers from schools in Fresno County. Nineteen of the subjects were male (14.1%) and 116 were female (85.9%). Fifteen of the 136 subjects were single (11.0%), 99 were married (72.8%), 19 were divorced (14.0%), 3 were separated (2.2%), and none were widowed.

Thirty-two had a bachelor's degree (24.2%), 10 had a bachelor's degree plus 15 units (7.6%), 69 had a bachelor's degree plus 30 units or a master's degree (52.3%), and 21 had a master's degree plus more units or a doctorate (16.0%).

Of the 136 subjects, 6 were Asian (4.4%), 2 were black (1.5%), 11 were Hispanic (8.1%), 3 were Native American (2.2%), and 114 were white (83.8%).

Seventy-six taught in kindergarten through third grade (55.9%), 3 taught in Grades 3 through 5 (2.2%), 43 taught in Grades 4 through 6 (31.6%), 11 taught in Grades 4 through 8 (8.1%), and 3 taught in Grades 6 through 6 (2.2%). Of the 129 who responded to size of school based on enrollment, 13 taught in small school with up to 200 students enrolled (10.1%), 79 taught in medium-sized schools with 201 to 400 students enrolled (61.8%), and 37 taught in large schools with 401 to over 600 students enrolled (28.7%). All 136 subjects responded to the socioeconomic status of their students. Thirty-nine had students in the lowest income group (28.7%), 56 had low-middle income students (41.2%), 31 had middle income students (22.8%), 8 had upper-middle income students (5.9%), and 2 had upper income students (1.5%).

The mean number of years at their present site for the 136 subjects was 6.62. The range of years at their present site was zero to 27. Of the 135 subjects who responded to number of years of teaching experience, the mean was 10.89. The range was zero to 31 years. All 136 subjects responded to how many students they taught in their classroom. The mean was 28.64 and the number of students ranged from 18 to 36.

Research Instruments

A questionnaire containing the following material was completed by the subjects three times during the 1985-1986 school year: background information; a coping scale; questions regarding appraisal, emotions, expectations, change, commitment; an efficacy scale; a role strain scale; a school climate scale; a job satisfaction scale; a depression scale; a negative well-being scale; questions regarding absenteeism, illness, visits to the doctor, intention to leave the profession, and intention to leave the school; and a burnout inventory.

The scales, for this study, tapped three major dimensions--person, environment, and burnout. The scales that tapped the dimension of teachers' personal characteristics measured appraisal, emotions, efficacy, expectations, commitment, ways of coping, and change. The scales that tapped the dimension of teachers' environmental characteristics measured role strain and school climate. The scales that tapped the third dimension which was an outcome measure, a multidimensional concept of burnout, included job satisfaction, depression, health symptoms, emotional distress, absenteeism, illness,

visits to the doctor, intention to leave the profession, intention to leave the school, emotional exhaustion, depersonalization, and personal accomplishment.

Person Measures

Primary and secondary appraisal. Lazarus and Folkman's (1984) theory stated that psychological stress is determined by the person's appraisal of a specific encounter with the environment. The appraisal is shaped by the person factors and the situation factors. Folkman and Lazarus' (1980, 1985a) theory and research were predicated on five types of major variables which are: stress, appraisal, coping, person, and environment antecedents of stress and coping, and short- and long-term adaptational outcomes.

The degree of stress a person experiences depends on how much of a stake he or she has in the outcome of the encounter. The emotions scale (Folkman & Lazarus, 1985a) was used to measure primary appraisal, what is at stake, because emotions reflect the individual's cognitive appraisal of the event (Lazarus & Folkman, 1984).

In this study, the emotions scale was used in a similar way to how Folkman and Lazarus (1985a) used the scale. In Folkman and Lazarus' study (1985a), subjects were asked to indicate on a 5-point Likert scale (0 = *not at all*, 4 = *a great deal*) the extent to which they felt 15 emotions which can be grouped into appraisal categories of the anticipatory emotions of threat and challenge, and the outcome emotions of harm and benefit. Scales were scored by summing the ratings for each item. The reliabilities for each of these rationally devised scales

were calculated for each of the three administrations. The mean alpha for the threat emotions scale was .80, .59 for the challenge emotion scale, .84 for the harm emotions scale, and .78 for the benefit emotion scale. In the present study, subjects were asked to indicate on a 4-point scale (0 = *not at all*, 3 = *a great deal*) the extent to which they felt the 15 emotions.

The initial attempts to measure secondary appraisal, the individual's evaluation of his or her coping options, were reported in Folkman and Lazarus (1980). A fundamental feature of secondary appraisal, which is also easiest to measure according to Lazarus and Folkman (1984), is the extent to which the person senses that something can or cannot be done to alter the troubled person-environment relationship. In the present study, subjects indicated the extent to which four statements ("You could change or do something about it; You had to accept it; You needed to know more before you could act; and You had to hold yourself back from doing what you wanted to do") applied to the specific stressful work event that they chose by responding on a 4-point scale (0 = *does not apply*, 3 = *very strongly applies*).

Teacher efficacy scale. Gibson (Gibson & Brown, 1982; Gibson & Dembo, 1984) based her Teacher Efficacy Scale on Bandura's (1977, 1978) theory of self-efficacy. Bandura (1977) proposed that one's behavior is determined not only by a general outcome expectancy (belief that behavior will lead to desirable outcome), but also by a sense of self-efficacy (belief that one has the requisite skills to bring about the outcome).

Outcome expectancy, the belief that a behavior will lead to desirable outcomes, essentially reflects the degree to which students can be taught, given their family background, socioeconomic status, and school conditions. Gibson's (Gibson & Brown, 1982; Gibson & Dembo, 1984) Teaching Efficacy, Factor 2, therefore measures the expectations teachers have as to whether teaching actually accomplishes what it is expected to, which is to educate children. Outcome expectancy would essentially reflect the degree to which a teacher felt the environment could be controlled.

Self-efficacy, the belief that one has the requisite skills to bring about the outcome, indicates a teacher's rating of his or her own abilities to perform the necessary tasks to bring about positive student change and is represented by Gibson's (Gibson & Brown, 1982; Gibson & Dembo, 1984) first factor, Personal Efficacy.

Factor analysis (Gibson & Brown, 1982) supported teacher efficacy as a multidimensional construct, consisting of at least two dimensions corresponding to Bandura's two-component model of self-efficacy. Evidence of construct and convergent validity of teacher efficacy was provided by correlations with locus of control suggesting that self-efficacy dimensions and locus of control dimensions are related constructs (Gibson & Brown, 1982).

In the present study, the Teacher Efficacy Scale was used as a measure of secondary appraisal that assesses teachers specifically. Teachers indicated on a 6-point Likert scale the degree to which they

agreed or disagreed with each statement from 1 (*strong disagree*) to 6 (*strongly agree*).

Expectations. Lazarus and Folkman (1984) thought that beliefs are one of the important personal characteristics that help determine appraisal. Expectations for the school year is a preexisting notion about reality which serves as a perceptual lens. In appraisal, beliefs determine what is fact; that is, how things are in the environment, and beliefs shape the understanding of the meaning of the environment. Expectations regarding how difficult the subjects expected the 1985-1986 school year to be were measured by a one-item question with a four-item response (0 = *not difficult at all*, 3 = *extremely difficult*).

Commitment. Commitment is another person characteristic that Lazarus and Folkman (1984) considered as an important determinant of appraisal. Commitments express what is important to the person, what has meaning for him or her. It determines what is at stake in a specific stressful encounter.

Kobasa (1977) measured commitment in five areas of functioning by looking at four sorts of attitudes in her study of stress, personality, and health using the Alienation Versus Commitment Test (Maddi, Kobasa, & Hoover, 1979). The test has adequate internal consistency and stability. Coefficient alphas for all scales were found to range from .75 to .95. The 12 questions from the test that concern attitudes toward work were used in this study. Subjects were asked to indicate on a scale of 9 (*not true at all*) to 4 (*completely true*) the degree to

which they agreed with each of the statements. The responses were summed to assess the individual's level of commitment.

Ways of coping. The Ways of Coping Questionnaire-Revised (Folkman & Lazarus, 1985b) is a 66-item process measure containing a wide range of thoughts and actions, designed to elicit information about the strategies a person uses to deal with the demands of a specific stressful encounter.

In the present study, the scales from the study of examination stress (Folkman & Lazarus, 1985a) were used because teachers completed the Ways of Coping Questionnaire three times throughout the 1985-1986 school year as part of a study of work stress and burnout. Teachers briefly described a specific stressful work event they encountered by stating who was involved and what happened. Then they responded to the Ways of Coping Questionnaire as it applied to this specific event.

Environment Measures

Role strain. The Job-Related Tension Index, a 15-item Likert-type scale, is an overall measure of perceived psychological tension or strain associated with stresses at work. Eisenstat and Felner (1984) found this scale to be an overall job stress scale with higher scores indicating greater experienced stress. It was developed by Gurin, Veroff, and Field (1961) and revised and used in national studies conducted by the Survey Research Center at the University of Michigan by Kahn et al. (1964). Reports on internal consistency of the Job-Related Tension Index, and variations of it, range from .73 to .87 (Axelrod &

Gavin, 1980; Gemmill & Heisler, 1972; Ivancevich & Donnelly, 1974; Knoernschild, 1970; Luke, 1979; Ramos, 1975; Tung, 1980).

Teachers were asked to rate how frequently they felt bothered by each of the 15 role-related stressors on the full scale using a 5-point scale ranging from 1 (*never*) to 5 (*nearly all the time*). Items not relevant to a particular teacher were rated 0 (*doesn't apply*). Scores on each of the perceived role subscales were calculated by summing the weighted responses on each item that made up that subscale as suggested by Kim and Mueller (1978).

School climate. Two scales applicable to teachers were taken from Deer's (1980) questionnaire for measuring the organizational climate of schools. The two scales are Teachers' Perceptions of Teacher Group Behavior and Teachers' Perceptions of Principal Behavior. The first of these is a 24-item scale consisting of four subscales: Job orientation, or desire of the teachers to participate in school functions; school organization; personal relations; and communication with parents, other teachers, and state agencies. Each item is presented as a statement (e.g., "Teachers go about their work with enthusiasm") and teachers were asked to indicate agreement on a scale ranging 1 = *strong disagree* to 5 = *strong agree*. The second scale, Teachers' Perceptions of Principal Behavior, is a 34-item scale, constructed in the same format as the first, and with four subscales. These subscales concern the following: Degree of decision-making participation allowed, sensitivity to school's problems, interest in teachers' professional development, and sensitivity to teachers' problems. Scores on the subscales for both

Teachers' Perceptions of Teacher Group Behavior and Teachers' Perceptions of Principal Behavior are calculated by summing the scores on items with positive orientation and subtracting the scores on items with negative orientations as recommended by Deer (1980). Alpha reliabilities for all subscales exceed .80 and the results of the scales (Deer, 1980) are a means of validating the dimensions of organizational climate.

Multidimensional Burnout Measures

Job satisfaction. The degree of satisfaction with the job was measured by a scale of job satisfaction developed by Hackman and Oldham (1974) for their Job Diagnostic Survey. The scale consists of 13 items regarding the "degree to which the employee is satisfied and happy with his job" (Hackman & Oldham, 1974, p. 6). Each item is rated on a 7-point rating scale that ranges from 1 = *extremely dissatisfied* to 7 = *extremely satisfied.* A job satisfaction score is produced by summing the scores on all the items. The alpha reliability of this scale is .85. Internal consistency reliability is .76. In general, the results suggest that both the internal consistency reliability of the scale and the discriminant validity of the items are satisfactory (Hackman & Oldham, 1974).

The Zung Self-Rating Depression Scale (ZDS). The Zung Self-Rating Depression Scale was first published by William W. K. Zung, MD, in 1965. It is a short, simple quantitative measurement of depression as an emotional disorder. The scale was devised for use in psychiatric research, though it is also used clinically for the early diagnosis of

depression. Depression is defined operationally by this scale as "a syndrome comprised of coexisting signs and symptoms which signify the presence of pathological disturbances or changes in four areas: somatic, psychological, psychomotor, and mood" (Zung, 1974, p. 1). Factor analytic studies have shown these to be common underlying dimensions of depression. The scale includes 20 items in a Likert-type format with responses ranging from *none or a little of the time* to *most or all of the time.* The scale takes several minutes to complete. Half of the statements are worded symptomatically positive and half are worded symptomatically negative to guard against the subject establishing a trend in his or her responses. Scores range from 20 to 80; scores above 50 indicate the presence of depression.

In the present study, teachers indicated how much the 20 statements applied to them by circling one of the numbers on the 4-point Likert scale to measure their level of depression.

Negative well-being. The variable of negative well-being provides a relatively objective measure of stress that can be used to validate other self-report measures (Turk & Litt, 1982). In the present study, negative well-being was measured using a 30-item scale developed by Zelenznik et al. (1977. This scale is the result of factor analysis of a number of psycho-physiological indicators of stress. Four stress clusters of symptoms are measured by this scale: Emotional distress, cardiovascular, gastrointestinal, and respiratory. Turk and Litt (1982) and Litt and Turk (1985) asked teachers to rate the frequency with which they have experienced each of the symptoms on a 5-point rating scale

ranging from 1 = *never* to 5 = *nearly all the time*. A score for negative well-being was obtained by summing the responses on items of both emotional distress and physical symptomatology. The alpha reliability of this scale was .88. This measure demonstrated satisfactory validity (Turk & Litt, 1982).

Absenteeism. In the present study, absenteeism was measured by three questions. Subjects were asked to indicate the number of days they had been absent during a specific time period; how many of these days were they ill; and how many visits did they make to the doctor due to their own health concerns during the specific time period.

Intention to leave the profession. Intention to leave teaching is negatively associated with job satisfaction (Kyriacou & Sutcliffe, 1979b) and is an important variable in its own right. Kraut (1975) indicated that employees' expectations regarding teaching tends to be a reliable indicator of actual turnover. Thus, intentions regarding turnover were determined to be an adequate surrogate for actually leaving the profession. In the present study, teachers were asked their thoughts about leaving teaching and changing schools on a 5-point scale ranging from 1 = *have never thought about this* to 5 = *have thought about this very often.*

Maslach Burnout Inventory. The Maslach Burnout Inventory (MBI) was developed by Maslach and Jackson (1981a) through their work in the helping professions. This instrument provides a measure of perceived burnout in terms of the three subscales of emotional exhaustion, depersonalization, and personal accomplishment. Each of the 22 items is

rated twice, once for frequency and once for intensity. The frequency rating ranges from 1 (*a few times a year*) to 6 (*every day*). The intensity rating ranges from 1 (*very mild, barely noticeable*) to 7 (*major, very strong*). A place is provided for the respondent to check *never* if the feeling or attitude described is never experienced. In such a case, both frequency and intensity are scored 0. For each of these subscales, separate scores are provided for the frequency of and the intensity with which the feelings are perceived. The item scores are summed and then averaged to obtain the subscale score. According to Maslach and Jackson (1981a), an individual with high scores on the emotional exhaustion and depersonalization subscales and a low score on the personal accomplishment subscale would be perceiving him- or herself as more burned out. Thus, a person is not classified as "burned out" or "not burned out", but rather placed on a continuum from "more burned out" to "less burned out". Maslach and Jackson have reported considerable evidence supporting the reliability and validity of the MBI when used with workers in the helping professions, including teachers (Belcastro et al., 1983).

In the present study, the word "students" was used in place of "recipients". The intensity scale was used, but not the frequency scale. This modification is based on Iwanicki and Schwab's (1981) study in which a high subscale intercorrelation was found between intensity and frequency.

Burnout

Maslach and Jackson (1981a) conceptualized burnout as a continuous variable, ranging from low to moderate to high degrees of experienced feeling. According to them, burnout is not viewed as a dichotomous variable where it is either present or absent. Maslach and Jackson (1981a) identified three aspects of the burnout syndrome--emotional exhaustion, depersonalization, and personal accomplishment. These aspects were analyzed separately according to Maslach and Jackson's (1981a) ranges, as seen in Table 1. Each aspect was broken down into low, moderate, and high categories based on Maslach's (Maslach & Jackson, 1981a) norms. Therefore, low feelings of depersonalization or emotional exhaustion indicate low experienced burnout, moderate feelings indicate moderate experienced burnout, and high feelings indicate high experienced burnout. The reverse is true for personal accomplishment indicates low experienced burnout. A moderate sense of personal accomplishment indicates moderate experienced burnout. A low sense of personal accomplishment indicates high experienced burnout.

Based on this coding system and Maslach and Jackson's (1981a) ranges and levels of experienced burnout, the group movement over time can be discussed regarding each of these three variables (Table 1). At Time 1, 17% of the teachers experienced high degrees of burnout and 42% experienced moderate degrees of burnout on the depersonalization scale. This decreased to 11% and 38%, respectively, at Time 2 and then increased to 18% and decreased to 37%, respectively, at Time 3.

Table 1

Coding System of Three Burnout Variables Using Maslach's Ranges

Variable	Maslach's burnout ranges	Time 1 N	Time 1 %	Time 2 N	Time 2 %	Time 3 N	Time 3 %
Depersonalization		135		135		135	
	Low burnout < 6	55	40.7	69	51.1	61	45.2
	Moderate burnout = 7-14	57	42.2	51	37.8	50	37.0
	High burnout > 15	23	17.0	15	11.1	24	17.8
Emotional exhaustion		135		135		135	
	Low burnout<25	45	33.3	71	52.6	57	42.2
	Moderate burnout = 26-39	61	45.2	43	31.9	49	36.3
	High burnout > 40	29	21.5	21	15.6	29	21.5
Personal accomplishment		135		135		135	
	Low burnout < 44	30	22.2	46	34.1	46	34.1
	Moderate burnout = 37-43	48	35.6	45	33.3	42	31.1
	High burnout > 36	57	42.2	44	32.6	47	34.8

Regarding feelings of emotional exhaustion, 22% of the teachers were experiencing high degrees of burnout and 45% were experiencing moderate degrees of burnout at Time 1. This decreased to 16% and 32%, respectively, at Time 2 and increased to 22% and 36%, respectively, at Time 3.

Of the three testing times, the greatest percentage of the teachers (18%) experienced high degrees of burnout on the depersonalization scale at Time 3. On the emotional exhaustion scale, the greatest percentage of the teachers (22%) experienced high degrees of burnout at Times 1 and 3. On the personal accomplishment scale, the greatest percentage of the teachers (42%) experienced high degrees of burnout at Time 1.

Maslach and Jackson (1981a) have determined a pattern of most burned out and a pattern of least burned out. Someone who is most burned out would experience high feelings of depersonalization and emotional exhaustion and a low feeling of personal accomplishment. An individual who was least burned out would experience low feelings of depersonalization and emotional exhaustion and a high feeling of personal accomplishment. In this study, most burned out was recoded as a 9 (3 on each of the 3 subscales), and least burned out was recoded as a 3 (1 on each of the 3 subscales). Three indicates the high range of depersonalization and emotional exhaustion and the low range of personal accomplishment. One indicates the low range of depersonalization and emotional exhaustion and the high range of personal accomplishment. This departs from Maslach and Jackson (1981a), since they did not

combine the subscales into overall scores. They also strongly recommended using original numerical scores rather than categorizing the scores into low, moderate, and high. According to them, the power of statistical analyses is greatly enhanced by using the full range of scores. Coding and recoding were used in this study along with using the original numerical scores to explore burnout to its fullest.

In this study, according to Maslach and Jackson's (1981a) patterns of most and least burned out, at Time 1, 4% of the teachers were most burned out; at Time 2, 3% were; and at Time 3, 7% were. Over time, 16 different individuals were most burned out at Time 1, Time 2, or Time 3; this accounted for 12% of the teachers being most burned out during the year. Three of these 16 teachers were most burned out 2 of the 3 times.

At Time 1, 15% of the teachers were least burned out; at Time 2, 21% were; and at Time 3, 20% were. Over time, 37 different individuals were least burned out at Time 1, Time 2, or Time 3; this accounted for 28% of the teachers being least burned out during the year. Thirteen of these 37 teachers were least burned out 2 of the 3 times, and 11 of these 37 teachers were least burned out at all three times. The remaining 60% of the teachers feel somewhere in-between most and least burned out on the burnout continuum.

Maslach and Jackson (1981a) suggested computing means and standard deviations for the entire sample and comparing the data to their normative data. Table 2 illustrates the means and standard deviations of the three Maslach Burnout Inventory subscales in this study of 135

Table 2

Means, Standard Deviations, Dependent t Tests, and Comparison With Maslach and Jackson's Norm Group

MBI subscales	Teachers N = 135 Time 1 $\bar{X}$ (SD)	Time 2 $\bar{X}$ (SD)	Time 3 $\bar{X}$ (SD)	Maslach & Jackson (1981) N = 1,936 human service workers	1 sample t value Time 1	Time 2	Time 3
Emotional exhaustion	29.63 (12.10)	25.53 (13.48)	26.97 (13.92)	31.68 (13.84)	-.20	-5.30*	-3.93*
Depersonalization	8.70 (5.50)	7.25 (6.23)	7.93 (6.23)	11.71 (8.09)	-6.40*	-8.26*	-7.00*
Personal accomplishment	41.50 (6.31)	39.99 (7.24)	40.19 (7.45)	39.70 (7.68)	3.33*	.47	.77

* $p < .001$

Teachers as compared to Maslach and Jackson's (1981a) normative data of 1,936 human service workers. One-tailed sample t tests of significance were computed between the data in this study and Maslach and Jackson's (1981a) sample. Emotional exhaustion and personalization were significantly lower than the norm at each time except for emotional exhaustion at Time 1. Personal accomplishment was significantly higher than the norm at Time 1.

The means and standard deviations of this study and maslach and Jackson's (1981a) were compared to the means and standard deviations of two studies of teachers (Beck & Gargiulo, 1983; Belcastro, Gold, & Hays, 1983) using the same three subscales. Emotional exhaustion means from this study are lower than the mean (31.07) of Beck and Gargiulo's (1983) study of 218 teachers. In Belcastro et al.'s (1983) study of 710 teachers, the emotional exhaustion mean (18.86) which shifted two items from the emotional exhaustion scale to the depersonalization scale was lower. The depersonalization means of this study are lower than the means on these two studies of teachers (10.89 and 10.55, respectively). Personal accomplishment is higher than the means on these two studies (25.06 and 33.94, respectively).

Alexander et al. (1983), in their study of teachers, used Maslach and Jackson's (1981a) ranges and obtained mean scores indicating a moderate range of burnout. Emotional exhaustion and depersonalization were moderately related to each other. Personal accomplishment was independent of the other two subscales.

Factor Analysis of Burnout Variables

Since this study used a multidimensional model of burnout, examination of the intercorrelations among the different measures of burnout was undertaken utilizing factor analysis. A principal components analysis with a varimax rotation was completed. Only factors with an eigenvalue greater than 1.0 were selected for rotation. Three factor analyses of the burnout variables were completed; one at each of the three testing times. Table 3 illustrates the rotated factor matrix at Time 2 and indicates the three factors in order of loadings. The factor analysis at Time 2 was used because it was similar in structure to the factor analyses at Time 1 and Time 3, had stronger pattern coefficients, and accounted for more variability.

As illustrated in Table 3, the rotated factor matrix indicates the three factors in order of loadings. The factors represent 66% of the variance in the variable set. Factor 1, labeled Emotionality, is comprised of physical symptoms, emotional distress, depression, emotional exhaustion, lack of personal accomplishment, and depersonalization. It represents 31% of the variance. Factor 2, labeled Dissatisfaction, is comprised of thoughts of wanting to leave the school, job dissatisfaction, and thoughts of wanting to leave the profession. It represents 18% of the variance. Factor 3, labeled Absence, is comprised of number of days of illness and absence, and number of visits to the doctor. It represents 17% of the variance. The factor structure in this study is dissimilar to Maslach's (Maslach & Jackson, 1981a) because all three of her independent factors, Emotional

Table 3

Rotated Factor Matrix for Burnout Variables

Label	Factor 1 Emotionality	Factor 2 Dissatisfaction	Factor 3 Absence	Communality
Thoughts about leaving the profession	.27	.68[a]	.27	.61
Thoughts about leaving the school site	.09	.81[a]	-.16	.68
Number of days absent	.00	.10	.88[a]	.78
Number of days ill	-.05	.09	.91[a]	.83
Number of visits to the doctor	.33	-.13	.59[a]	.47
Job satisfaction	-.30	-.81[a]	-.07	.74
Depersonalization	.72[a]	.12	.04	.54
Personal accomplishment	-.53[a]	-.26	.01	.35
Emotional exhaustion	.75[a]	.48	.07	.79
Depression	.84[a]	.20	.05	.76

Table 3 (continued)

Label	Factor 1 Emotionality	Factor 2 Dissatisfaction	Factor 3 Absence	Communality
Emotional distress	.86[a]	.17	.10	.77
Physical symptoms	.77[a]	.05	.10	.60
Percent of variance	31	18	17	= 66

[a]Items used to compute scale score.

Exhaustion, Personal Accomplishment, and Depersonalization, fell together in Factor 1, Emotionality. It seems that Maslach's three factors were emotionality issues. This study used other variables and instruments, including Maslach's scale; therefore, other dimensions of burnout were measured and identified.

Prediction of Burnout

Lastly, person and environment variables at Time 1 were analyzed to see if they could predict burnout at Times 2 and 3. Table 4 illustrates the burnout factors at Time 2 with the person and environment variables at Time 1 to examine which person and environment variables at Time 1 predict burnout at Time 2. The key person variable that predicts Emotionality are benefit emotions, which are the positive outcome emotions of exhilarated, pleased, happy, and relieved; the lack of focusing on the positive as an emotion-focused way of coping; and lack of commitment to job. The key environment variables that predict Emotionality are the principal's personal consideration for staff; lack of participatory management, a principal behavior; and lack of job orientation (a lack of desire of teachers to participate). The key person variables that predict Dissatisfaction are lack of detachment as an emotion-focused way of coping, lack of commitment to the job, and lack of feeling control over change. The key environment variables that predict Dissatisfaction are lack of job orientation (the lack of desire of teachers to participate), lack of sensitivity to school problems, and personal consideration for staff, both of which are principal behaviors.

Table 4

Multiple Regressions--Prediction of Burnout at Time 2 With Person and Environment Variables at Time 1

Analysis	Key variables	Beta weight	R	R^2
Emotionality with person variables	Benefit emotions	.27		
	Focusing on the positive coping	-.25		
	Lack of commitment to job	.24		
			.57	.33**
Emotionality with environment variables	Role overload	.36		
	Participatory management	-.29		
	Personal consideration for staff	.24		
			.54	.29**
Dissatisfaction with person variables	Detachment coping	-.47		
	Lack of commitment to job	.40		
	Amount of control felt over change	-.27		
			.67	.45**

Table 4 (continued)

Analysis	Key variables	Beta weight	R	R^2
Dissatisfaction with environment variables	Job orientation, desire to participate	-.33		
	Sensitivity to school problems	-.26		
	Personal consideration for staff	.26		
			.69	.48***
Absence with person variables	Challenge emotions	-.43		
	Wishful thinking coping	-.34		
	Self-blame coping	-.29		
			.53	.29
Absence with environment variables	Participatory management	.83		
	Professional consideration for staff	-.40		
	Personal consideration for staff	-.39		
			.45	.20

*p < .05, **p < .01, ***p < .001

Table 5 shows the results of the regression analyses in which the burnout factors at Time 3 were predicted by the person and environment variables at Time 1. There is a moderate correlation between Emotionality and person variables and environment variables, and between Dissatisfaction and environment variables with a range of .35 to .59. The key person variables that predict Emotionality are harm emotions, which are the negative outcome emotions of angry, sad, disappointed, guilty, and disgusted; benefit emotions; and lack of commitment to job. The key environment variables that predict Emotionality are professional consideration for teachers and lack of participatory management, both principal behaviors, and role conflict, a role strain variable. The key environment variables that predict Dissatisfaction are all principal behavior variables, lack of participatory management, personal consideration for staff, and lack of sensitivity to school problems.

Table 5

Multiple Regressions--Predictions of Burnout at Time 3 With Person and Environment Variables at Time 1

Analysis	Key variables	Beta weight	R	R^2
Emotionality with person variables	Harm emotions	.30		
	Benefit emotions	.27		
	Lack of commitment to job	.25		
			.61	.37**
Emotionality with environment variables	Professional consideration of staff	.37		
	Participatory management	-.35		
	Role conflict	.31		
			.59	.35***
Dissatisfaction with person variables	Lack of commitment to job	.45		
	Detachment coping	-.29		
	Expectations for a difficult year	-.28		
			.60	.35

Table 5 (continued)

Analysis	Key variables	Beta weight	R	R^2
Dissatisfaction with environment variables	Participatory management	-.61		
	Personal consideration for staff	.40		
	Sensitivity to school problems	-.37		
			.77	.59***
Absence with person variables	Threat emotions	-.48		
	Wishful thinking coping	.43		
	Detachment coping	-.27		
			.53	.28
Absence with environment variables	Personal consideration for staff	-.40		
	Sensitivity to school problems	.36		
	Participatory management	-.22		
			.40	.16

*p < .05, **p < .01, ***p < .001

DISCUSSION

Burnout as a Multidimensional Concept

The contention of this study, that burnout is a multidimensional concept, was supported. Three burnout factors, Emotionality, Dissatisfaction, and Absence, were identified to create a multidimensional concept of burnout (see Table 3, pp. 28, 29). Emotionality accounted for the most variance; it includes depersonalization, lack of personal accomplishment, emotional exhaustion, depression, emotional distress, and physical symptomatology. Dissatisfaction includes thoughts of leaving the profession and the school site, and job dissatisfaction. Absence includes number of days absent and ill, and number of visits to the doctor.

The three factors of burnout are distinct because they measure three different, independent dimensions of burnout. Emotionality measures physical symptoms and emotions in connection with the job of teaching, Dissatisfaction measures thoughts about the job, and Absence measures time missed from school.

The findings of several studies (Bridges, 1980; Coates & Thorenson, 1976; Kyriacou & Sutcliffe, 1979b; Price, 1971) suggest that teacher stress is a multidimensional construct rather than the unidimensional view held in the past (Kyriacou & Sutcliffe, 1978a, 1978b; Litt & Turk, 1985). Using the premise that teacher job stress and burnout are similar concepts, if not the same concept (Belcastro et al., 1983; Cunningham, 1983; Jackson & Maslach, 1982; Nagy, 1985;

Perlman & Hartman, 1982; Pines & Maslach, 1980; Schwartz et al., 1983; Turk et al., 1982), the multidimensional concept of stress found by Litt and Turk (1985) and Kyriacou and Sutcliffe (1979b) can be used to support a multidimensional concept of burnout.

Job satisfaction, absenteeism, and intention to leave the profession are three measures that have been employed widely as indices of occupational stress in general (Murrell, 1977; Warr & Wall, 1975) and teacher stress in particular (Chandler, 1976; Price, 1971). In Litt and Turk's (1985) study, stress was treated as a multidimensional concept encompassing teacher's job satisfaction, absenteeism, intent to leave teaching, and emotional and physical symptoms of distress. Other studies found these same variables were indicators of burnout (Belcastro, 1982; Belcastro & Gold, 1983; Perlman & Hartman, 1982). Maslach (1982b) and Levitov and Wangberg (1983) viewed burnout as an ongoing process that is multidimensional. This study supports their view.

Person and Environment Characteristics

In the literature, some theorists and researchers (Edelwich & Brodsky, 1982; Tubesing & Tubesing, 1982; Wilder & Plutchik, 1982) viewed personal characteristics as the stronger determinant of burnout. Most theorists and researchers, however (Burke, 1982; Carroll & White, 1982; Cherniss, 1980a, 1980b; Hendrickson, 1979; Maslach, 1976, 1981, 1982a, 1982b; Maslach & Jackson, 1981b, 1982, 1984; Maslach & Pines, 1977; Phillips & Lee, 1980; Pines et al., 1981; Pines & Maslach, 1976, 1978; Shinn et al., 1984), viewed the structure of the job and work

organization as a stronger determinant of the incidence of burnout than the individual's personality make-up. Other researchers (Blase, 1983; Freudenberger, 1982; Kyriacou & Sutcliffe, 1979b; Lazarus & Launier, 1978; Milstein & Golaszewki, 1983; Perlman & Hartman, 1980, 1982; Phillips & Lee, 1980) viewed burnout as a result of the interaction between person and perceived environmental variables.

This study supported the latter view that both person and environment characteristics are important in relation to burnout and in predicting burnout.

Person and Environment Predictors of Burnout

Some person and environment variables at the beginning of the school year had a predictive relationship with the multidimensional construct of burnout at the midpoint and end of the school year. The term prediction is used to indicate a relationship from person and environment variables at a previous time to burnout at later times (see Tables 4 and 5, pp. 31-32 and 34-35, respectively).

Person predictors of burnout. Certain aspects of the teachers' personal characteristics had the best predictive value for burnout. The person predictors of burnout can be grouped into primary cognitive appraisal variables, secondary cognitive appraisal variables, and coping resources/strategies. When a teacher encountered a stressful situation, he or she appraised the situation and looked at what was at stake to determine if he or she was all right or in trouble in that situation (Lazarus & Folkman, 1984); this is primary cognitive appraisal. The teacher also appraised what he or she could do about the situation by

evaluating his or her coping resources and options (Lazarus & Folkman, 1984); this is secondary cognitive appraisal.

In this study (see Tables 4 and 5, pp. 31-32 and 34-35, respectively), teachers with higher levels of burnout experienced benefit emotions which include exhilaration, pleasure, happiness, and relief, and harm emotions which include anger, sadness, disappointment, guilt, and disgust. Harm and benefit emotions are outcome emotions which indicate some damage and/or gain has already been sustained. It is possible that outcome emotions were felt because emotions were measured in relation to specific stressful situations which were occurring in the present or had already occurred. Benefit emotions are benign-positive appraisals, one of the three kinds of primary cognitive appraisals. According to Lazarus and Folkman (1984), these emotions occurred because the outcome of the stressful situation was construed as positive in that it preserved or enhanced the well-being of teachers with higher levels of burnout in this study. Lazarus and Folkman (1984) stated that totally benign-positive appraisals that are without some degree of apprehension are rare. Benign appraisals can generate guilt or anxiety. Appraisals can be complex and mixed, depending on person factors and the situational context. Harm emotions are stressful appraisals, another of the three kinds of primary cognitive appraisal. The emotions indicate that some damage to the person has already been sustained; this damage can involve illness, self-esteem, and social esteem. The most damaging life events are those in which commitments are lost. Therefore, in this study, teachers with higher levels of

burnout, according to their primary cognitive appraisals which examined what was at stake in specific stressful situations, felt they were being harmed and benefited in the present. This supports Lazarus and Folkman's (1984) theory that these feelings are not necessarily mutually exclusive. Although benefit and harm appraisals are distinguished from one another by their cognitive component (the judgment of harm versus gain) and their affective component (negative versus positive emotions), they can occur simultaneously.

The teachers with higher levels of burnout also experienced a lack of commitment to the job, a predictor of burnout which occurred slightly more often than the other predictors. According to Kobasa (1979), individuals with a lack of commitment to the job have a negative attitude toward work, have alienated views about work, feel powerless, have no personal control over the situation, feel work is meaningless, are vegetative, and lack responsibility. Lazarus and Folkman (1984) viewed commitment as expressing what has meaning and is important to the individual. They think a high sense of commitment will help sustain coping efforts in the face of obstacles.

In this study, the teachers with higher levels of burnout experienced a lack of control over change when appraising what they could do in specific situations. They viewed their situations as unchangeable. Therefore, these teachers with higher levels of burnout underutilized the coping strategies of focusing on the positive and detachment in coping with their specific stressful situations. Teachers

with lower levels of burnout employed the above coping strategies in similar specific situations.

Pratt (1978) found that teachers' failure to cope with a wide variety of teaching problems led to stress, while Pearlin and Schooler (1978) found that coping responses had little effect in reducing stress resulting from work. Kyriacou (1980) found teachers coped with work stress mainly by taking considered action (i.e., problem-focused coping). This study does not support her finding; instead it was found that teachers in this study coped with work stress mainly by utilizing emotion-focused coping. Needle, Griffin, and Svendsen (1981) found only one coping mechanism, judging one's situation in positive terms as compared to circumstances experienced by significant others, was used somewhat effectively in reducing the impact of stress. This study supports the findings of Needle, Griffin, and Svendsen (1981), since focusing on the positive, an emotion-focused way of coping, helps individuals cope when there is nothing they can do to solve the problem caused by the stressful situation. In this study, teachers with lower levels of burnout employed focusing on the positive coping to prevent burnout.

In this study, teachers with higher levels of burnout expressed a negative attitude toward work, felt powerless to make any changes, and underutilized some coping skills. This study supports Kobasa's (1979) findings that when phone company executive felt alienated, without personal control, and threatened by change in the face of stresses, they

were severely and directly limited as to how successfully they could resist the negative impact of stress.

Environmental predictors of burnout. The environmental predictors of burnout (see Tables 4 and 5, pp. 31-32 and 34-35, respectively) can be grouped into role strain, teachers' perception of principal behavior. Role strain has been defined as the varying degree of difficulties that individuals experience in carrying out their occupational roles (Backman & Second, 1968). It is perceived psychological tension or strain associated with work stressors. The role teachers perceived for themselves and the school climate, particularly regarding the principal, were found to be important in predicting burnout.

Teachers with higher levels of burnout experienced role overload and role conflict. A major factor in the work environment which is linked to stress and burnout is role strain (Backman & Second, 1968). Teachers with higher levels of burnout had a lack of desire to participate in and involve themselves in school affairs; they were unenthusiastic and their morale was low. These teachers perceived that the principal did not endorse participatory management and was not sensitive to what was happening at the school site, not noticing problems until they were pointed out, and generally being uninvolved. Additionally, and at least on the surface contradictory, teachers with higher levels of burnout also perceived the principal to be concerned with their personal welfare and their professional development. The principal was seen as doing personal favors for teachers, approachable, and making allowances for individuals. He or she was also seen as

persuading teachers to take inservice training, listening to their ideas, encouraging them to try new ideas, and encouraging staff to give input about running the school.

The most important environmental predictors of burnout were the principal's lack of participatory management, the principal's lack of sensitivity to school problems, and the principal's consideration for teachers' personal welfare. Therefore, the teachers' perception of the school climate, especially regarding the principal, seems important in predicting teacher burnout. There seems to be a lack of leadership by the principal along with interest in staff's personal welfare which could be quite confusing, frustrating, and stressful. The principal was not giving any responsibility to the teachers, and he or she was not taking any responsibility for running the school. The lack of leadership would support the idea that the principal did not define teachers' duties and responsibilities clearly, which led to role strain. This supports Cherniss' (1980b) view that any job that is high in role conflict, low in autonomy, and situated in an organization that has poor leadership and supervision will generate much job stress and burnout in its employees. Barad (1979) found burnout to be a common consequence when autonomy and control are limited by the power structure of human service institutions.

In summary, this study supported the view that teachers with higher levels of burnout seemed to perceive their environment as lacking principals who monitor and evaluate, communicate decisions and directions, and serve and support workers regarding advice, learning,

and professional growth (Cherniss, 1980b; Cherniss & Egnatios, 1978a). Principals seemed to show concern and support for teachers' personal issues but lacked the other leadership qualities.

A Model of Burnout

The model of burnout proposed in this study seems useful because it suggests how cognitive appraisal and coping mediate burnout. The personal characteristics of teachers can be separated into primary cognitive appraisal, secondary cognitive appraisal, and coping resources/strategies. The primary cognitive appraisers of commitment to the job, emotions, and expectations for a difficult year related to burnout. The secondary cognitive appraiser of amount of control felt over change relates to burnout as do six (detachment, wishful thinking, self-blame, tension-reduction, and focusing on the positive, all of which are emotion-focused coping, and problem-focused coping) of the eight coping resources strategies used in this study. The characteristics of the school environment that relate to burnout are role strain and the teachers' perceptions of teacher group behavior and principal's behavior.

The multidimensional concept of burnout is composed of three distinct, independent factors. Emotionality measures physical symptoms and emotions in connection with the job of teaching; Dissatisfaction measures thoughts about the job; and Absence measures time missed from school.

This model of burnout implies that appraisal and coping processes affect the adaptational outcome of burnout. Cognitive appraisal is an

evaluative process that determines why, and to what extent, a particular situation will be stressful for an individual. The key issue for the person is to make a series of realistic judgments about the implications of the situation for his or her well-being. Primary appraisals examine what is at stake, while secondary appraisals evaluate what might and can be done when an individual is in jeopardy; it evaluates coping options. The environment is implied in the specific situations and, therefore, seems to have an impact on the appraisals.

This model goes beyond Maslach's concept of burnout; Maslach's factors (Emotional Exhaustion, Depersonalization, and Lack of Personal Accomplishment) are not that distinct from one another, since all three of them are clustered under the single factor, Emotionality, in this study.

Percentage of Burned Out Teachers

This study investigated the percentage of teachers experiencing burnout at the three testing times and examined the patterns of teacher burnout that emerged (see Table 1, p. 22). Maslach and Jackson's (1981a) ranges and levels of high, moderate, and low experienced burnout were used in this study. It is important to note that, according to Maslach and Jackson (1981a), everyone taking the Maslach Burnout Inventory (Maslach & Jackson, 1981a) falls somewhere on the burnout continuum from least to most burned out. Therefore, no one is *not* burned out (see Table 1). The scores on Maslach and Jackson's (1981a) subscales were coded and recoded to arrive at one burnout measure for all three subscales. Using these collapsed scores, at the beginning of

the school year, 4% of the teachers were highly burned out; at the middle of the school year, 3% were highly burned out; at the end of the school year, 7% were highly burned out. Therefore, more teachers were highly burned out at the end of the school year than at the beginning, even though there was a slight decline in number of highly burned out teachers from the beginning to the middle of the school year. According to these low percentages, teachers may not be as susceptible to high burnout as other helping professionals due to the teachers' 10-month work year. This gives them time to cope and/or prevent burnout.

Over the course of the year, 12% or 16 of the total number of teachers surveyed were highly burned out; 3 of these 16 teachers were highly burned out at 2 of the 3 testing times. Sixty percent of the teachers were moderately burned out over the course of the year. Belcastro (1982) found 27% of the teachers in her study were highly burned out using Maslach and Jackson's (1981a) ranges and levels. Belcastro and Gold (1983) found 11% of the teachers in their study were highly burned out according to the same ranges and levels.

Limitations of Study

As the scope of this study is limited, the results presented should not be overgeneralized, and some of the results must be qualified. This study did not consider public school teachers of Grades 9 through 12. It is possible that these teachers would differ significantly from the present sample. Only individuals who were actively engaged in the teaching profession at the time of the study were measured; therefore, those who left the profession, possibly due to

burnout or to prevent and/or cope with burnout, were not questioned. This sample was, therefore, a survival sample of teachers who volunteered to participate. Those who ere really burned out might not have bothered volunteering. On the other hand, those who were experiencing stress on the job might have volunteered to support the idea that teaching is a stressful profession.

There are no available demographics of Fresno County teachers to find out if this sample is representative of the teaching population, and the teachers in this study were from one county.

Since this study was done over time, it would have been ideal, yet impractical, to study the changes in teachers over a longer period of time. One school year might be too short of a time to note much change.

Practical Implications of the Study

Using Maslach and Jackson's (1981a) categories, 12% of the teachers in this study were highly burned out, and 60% were moderately burned out over the course of the 1985-1986 school year. It is hoped that the practical implications suggested here, based on the findings of this study, will assist in alleviating teacher burnout. Suggestions for topics to cover in principal and teacher education and training are discussed.

Teacher Training

Information from this study can be used to develop teacher training in the personal characteristics of appraisal and coping to better cope with and/or prevent teacher burnout. Training in cognitive restructuring of irrational thoughts would assist teachers in more

effectively appraising what is at stake (primary cognitive appraisal). As teachers learn to replace irrational thoughts with rational ones, they will experience more reasonable, rational feelings which will affect a change in their attitudes in a positive direction. This would assist in effective secondary cognitive appraisal; as teachers' attitudes improve, they will evaluate their resources and coping options more positively and effectively. It is hoped that with a more positive attitude, teachers would feel more committed to their jobs and more powerful about being able to change what is in their control.

Teachers also need training in coping strategies. They need to learn to use emotion-focused coping strategies when they are not in control of a specific stressful situation, and problem-focused coping strategies when they are in control of a specific stressful situation. The previously mentioned appraisal training via cognitive restructuring of irrational thoughts would help teachers accurately appraise which situations are within their power to change and which are not.

Principal Training

Principals need to be trained in how to alter the school environment to help alleviate and/or prevent teacher burnout. The findings suggest some specific areas of training for principals. Even though the school environment was measured by teachers' perceptions of it, it is still a reality for the teachers and must be addressed by principals. Principals need training in leadership and management skills. They need to learn how to get teachers involved in decision making via participatory management. Principals need to become more

sensitive to school problems and more actively involved at the school site. They need to be more available and visible. Principals need to learn to be supportive and provide structure and autonomy to teachers. There needs to be a clear, distinct, guiding philosophy established by the principal at the school site. Principals need to define the teachers' duties and responsibilities clearly. They need to recognize teachers and provide constructive feedback whether positive or negative.

For principals to learn how to empower teachers, it seems like they would first need to be assessed regarding their own personal characteristics in terms of appraisal and coping strategies. If needed, they could first be trained similarly to the training discussed for teachers and then trained in leadership and management skills. It would be difficult for a principal who ineffectively appraised and coped with stressful situations to feel able to alter the school environment.

It is important to consider that as teachers develop healthier, more effective appraisal skills, their perceptions of the environment might change. This would be based on the theory that there is a person-environment interaction, which has not been determined in this study.

Recommendations for Future Research

Since this study did not examine the person-environment interaction in relation to burnout, it is recommended that this be studied. Using a larger population, all the person and environment variable could be combined to see if, in combination, they account for more of the variance than they do separately.

It is also recommended that a longitudinal study be done over a longer period of time to follow the course of burnout and gather information about the development and successive phases of burnout. A longitudinal study could provide better evidence for the predictive relationship between burnout and various person, environment, appraisal, and coping variables.

A third recommendation would be to develop training modules for teachers and principals based on the findings from this study and complete a pilot study to see if the training affects appraisal, coping strategies, and school climate. The pilot study could be completed at several school sites where the teachers were pre-and post-tested to see if the training had an impact.

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